

REMARKS

I. Status Summary

Claims 1-44 are pending in the present application. Claims 1, 7-10, 13-14, 18-19, 24-27, 30, 32-33, 37, 40, and 44 have been amended. Therefore, upon entry of this amendment, claims 1-44 will be pending. No new matter has been introduced by the present Amendment. Reconsideration of the application as amended and based on the arguments set forth hereinbelow is respectfully requested.

Allowable Subject Matter

The applicant acknowledges with appreciation that claims 7-12, 14-18, 24-33, and 37-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 7 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 7 has been amended into independent form to include all of the limitations of independent claim 1, from which it depended. Therefore, it is respectfully submitted that the objection to claim 7 should be withdrawn and the claims allowed.

Claim 8 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 8 has been amended into independent form to include all of the limitations of independent claim 1,

from which it depended. Claims 9-12 depend from claim 8. Therefore, it is respectfully submitted that the objection to claim 8-12 should be withdrawn and the claims allowed.

Claim 14 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 14 has been amended into independent form to include all of the limitations of independent claim 1, from which it depended. Claims 15-17 depend from claim 14. Therefore, it is respectfully submitted that the objection to claim 14-17 should be withdrawn and the claims allowed.

Claim 18 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 18 has been amended into independent form to include all of the limitations of independent claim 1, from which it depended. Therefore, it is respectfully submitted that the objection to claim 18 should be withdrawn and the claim allowed.

Claim 24 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 24 has been amended into independent form to include all of the limitations of independent claim 19 and dependent claim 23, from which it depended. Therefore, it is respectfully submitted that the objection to claim 24 should be withdrawn and the claims allowed.

Claims 25-26 were indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 25-26 have each been amended into independent form to include all of the limitations of

independent claim 19, from which each depended. Therefore, it is respectfully submitted that the objection to claim 25-26 should be withdrawn and the claims allowed.

Claim 27 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 27 has been amended into independent form to include all of the limitations of independent claim 19, from which it depended. Claims 28-29 depend from claim 27. Therefore, it is respectfully submitted that the objection to claim 27-29 should be withdrawn and the claims allowed.

Claim 30 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 30 has been amended into independent form to include all of the limitations of independent claim 19, from which it depended. Claim 31 depends from claim 30. Therefore, it is respectfully submitted that the objection to claims 30-31 should be withdrawn and the claims allowed.

Claims 32-33 were each indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 32-33 have each been amended into independent form to include all of the limitations of independent claim 19, from which each depended. Therefore, it is respectfully submitted that the objection to claim 32-33 should be withdrawn and the claims allowed.

Claim 37 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 37 has been amended into independent form to include all of the limitations of independent claim 34,

from which it depended. Claims 38-39 depend from claim 37. Therefore, it is respectfully submitted that the objection to claim 37-39 should be withdrawn and the claims allowed.

Claim 40 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 40 has been amended into independent form to include all of the limitations of independent claim 34, from which it depended. Claims 41-43 depend from claim 40. Therefore, it is respectfully submitted that the objection to claim 40-43 should be withdrawn and the claims allowed.

Claim 44 was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 44 has been amended into independent form to include all of the limitations of independent claim 34, from which it depended. Therefore, it is respectfully submitted that the objection to claim 44 should be withdrawn and the claims allowed.

II. Objections

Objections -- Oath/Declaration

The Official Action asserts that the oath or declaration is defective because it is not signed and dated by the applicants. However, applicant respectfully notes that a declaration in compliance with 37 CFR 1.67(a) was submitted on April 15, 2004 in response to a notice to file missing parts dated April 5, 2004. A copy of the response

and the signed/dated declaration is included herein for reference. Accordingly, it is respectfully submitted that the objection to the oath/declaration should be withdrawn.

Objections -- Claims

Claims 1-33 are objected to as including various informalities. Specifically, the Official Action asserts that in claim 1, the antecedent basis of the phrase "master mode" is unclear. Claim 1 has been amended herein in accordance with the examiner's suggestion. Claims 2-7 and 13 depend from claim 1.

Claim 8 has been amended herein into independent form in accordance with the examiner's suggestion regarding claim 1. Claims 9-12 depend from claim 8.

The Official Action further asserts that in claim 9, the antecedent basis of the phrase "a canonical message" is unclear. Claim 9 has been amended herein in accordance with the examiner's suggestion.

The Official Action further asserts that in claim 10 the antecedent basis of the phrase "a canonical message" is unclear. Claim 10 has been amended herein in accordance with the examiner's suggestion.

Claim 14 has been amended herein into independent form in accordance with the examiner's suggestion regarding claim 1. Claims 15-17 depend from claim 14.

Claim 18 has been amended herein into independent form in accordance with the examiner's suggestion regarding claim 1.

The Official Action asserts that in claim 19, the antecedent basis of the phrase "a switched network element" is unclear. Additionally, the Official Action asserts that the

antecedent basis of the phrase "a slave mode" in claim 19 is unclear. Claim 19 has been amended herein in accordance with the examiner's suggestion. Claims 20-33 depend from claim 19.

Accordingly, it is respectfully submitted that the objections to claims 1-33 as containing informalities should be withdrawn.

III. Claim Rejections Under 35 U.S.C. § 102(b) and 102(e)

Claims 1-6, 13, 19-23, and 34-36 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2004/0047286 to Larsen et al. (hereinafter, "Larsen"). This rejection is respectfully traversed.

Independent claim 1, as amended herein, recites operating a first switch management module of a switch in a master mode that includes performing packet forwarding and participating in network protocols and maintaining packet forwarding information and protocol state information. The packet forwarding and protocol state information is communicated to a second switch management module operating in a slave mode. Operating the second switch module in the slave mode includes continuously monitoring the operational state of the first switch management module, and receiving the packet forwarding and protocol state information from the switch management module. In response to detecting failure of the first switch management module, the second switch management module switches to master mode and resumes network protocol operation from a state in which the first switch management module

last operated successfully based on the received packet forwarding and protocol state information. (Emphasis Added).

Independent claim 19, as amended herein, recites a method for hitless software upgrade or downgrade in a switched network element. The method includes operating a first switch management module in the switched network element in a master mode and operating a second switch management module in a slave mode. Operating in the master mode includes forwarding packets and participating in network protocols using a first software version and operating in the slave mode includes monitoring the operational state of the first switch management module using the first software version. A second software version is stored in memory and the second switch management module is rebooted using the second software version. Protocol state and packet forwarding information is distributed from the first switch management module executing the first software version to the second switch management module executing the second software version. The second switch management module is switched from operating in the slave mode to the master mode, wherein operating in the master mode includes starting packet forwarding and network protocol operations using the protocol state and packet forwarding information received from the first switch management module, thereby starting from the last correct network protocol operational state of the first switch management module. (Emphasis Added).

Independent claim 34 recites a system for hitless switch management module failover that includes a first switch management module and a second switch management module. The first switch management module initially operates in a

master mode, manages the programming of hardware forwarding tables in a switched network element, participates in network protocols, and distributes protocol state, switch configuration, and packet forwarding information to the second switch management module. The second switch management module operates in a slave mode, stores the packet forwarding, switch configuration, and protocol state information received from the first switch management module, and monitors the operational state of the first switch management module. In response to failure of the first switch management module, the second switch management module operates in the master mode in a last correct network protocol operational state of the first switch management module based on the received protocol state and packet forwarding information. (Emphasis Added).

There is no teaching or suggestion in Larsen of resuming, at a switch management module formerly operating in a slave mode, network protocol operation from a state in which a switch management module formerly operating in a master mode last operated successfully. Rather, Larsen teaches a standby control blade that becomes an active control blade upon detecting failure of the active control entity. In order to reduce switchover time, Larsen teaches that protocol and state information is initially synchronized between the active and standby control blades, and thereafter, each blade operates independently. For example, Larsen states that:

The synchronization process requires that the state on the active control blade be transferred to the standby control blade. The state is typically kept in a database, in an appropriate format. The synchronization process transfers the contents of the database from the active control entity to the standby control entity. (See paragraph 35 of Larsen).

Once the control blades have been synchronized with the same state, if the processors on both control blades have identical hardware configurations and

run identical versions of software, then identical inputs will produce identical states in such control blades. (See paragraph 36 of Larsen).

According to the above quoted passages, Larsen discloses initially synchronizing the states of an active and standby control blade operating with identical hardware and software configurations. Thus, in the event of failure of the active control blade, the standby control blade becomes the active control blade and begins operating using its current state information. However, nowhere in Larsen is resuming, at the active control blade formerly operating a the standby control blade, network protocol operation from a state in which a switch management module formerly operating in a master mode last operated successfully disclosed.

Accordingly, because Larsen fails to teach or suggest resuming, at a switch management module formerly operating in a slave mode, network protocol operation from a state in which a switch management module formerly operating in a master mode last operated successfully, it is respectfully submitted that the rejection of independent claims 1, 19, and 34 and dependent claims 2-6, 13, 20-23, and 35-36 as anticipated by Larsen should be withdrawn.

CONCLUSION

In light of the above Amendments and Remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Amendments and Remarks, the Patent Examiner is

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respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

DEPOSIT ACCOUNT

A check in the amount of \$3,120.00 is enclosed. However, the Commissioner is hereby authorized to charge any deficiencies of payment or credit any overpayments associated with the filing of this correspondence to Deposit Account No. **50-0426**.

Respectfully submitted,

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Date: October 12, 2007

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